melanoma is rare. The most common combinations are BCC with squamous cell carcinoma, BCC with seborrhoeic keratosis and BCC with neurofibroma. The prognosis of each tumour must be considered separately. Melanoma colonising the BCC should still be considered as 'in situ' and not as invasive if no atypical melanocyte is found outside the BCC nests.

Here we report two cases of BCC associated with melanoma. In the first case, BCC was associated with melanoma *in situ*. The atypical melanocytes were confined to the nests of basal cell carcinoma. In the second case, BCC was admixed with invasive melanoma. In this case, the atypical melanocytes were present within the BCC nests, but were also identified within the dermis, outside the nests of BCC. The presence of two coexisting neoplasms was confirmed on immunohistochemistry.

In addition, we compared these cases with a pigmented BCC showing benign melanocytes colonising the tumour cell nests. The key diagnostic features of this collision tumour, its pathogenesis, differential diagnosis and its prognosis will be discussed.

MINERAL OIL INDUCED SCLEROSING LIPOGRANULOMA OF THE PENIS – A CASE REPORT

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Injection into the subcutaneous tissues of the penis for augmentation has been practiced throughout history. With the recognition of complications and sequelae the practice has died out in the developed world. However, it is still practiced in parts of Europe and Asia today, though the extent of the practice is unknown, and today's published literature may only scratch the surface. We report a case of mineral oil induced sclerosing lipogranuloma of the penis in a 55-year-old male from Papua New Guinea who presented with a mass involving the penile prepuce and shaft skin. This case demonstrates the diagnostic challenges and interesting pathology seen in developing countries. The treatment of choice is radical excision of the lesions with skin grafts.

A RANT ABOUT A SANT: A RARE MIMIC OF SPLENIC HAEMANGIOMA

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Sclerosing angiomatoid nodular transformation (SANT) of the spleen is a rare, benign, vascular lesion with characteristic histological features. Often an incidental finding, full excision of the lesion has been shown to be curative. We describe a case of SANT in a 35-year-old woman who presented with a purported splenic haemangioma with atypical imaging features including an uncharacteristic enlargement over a two-year period. Gross examination of the splenectomy specimen revealed a circumscribed 42 mm white, lobulated mass with prominent central sclerosis and dilated vascular spaces at the periphery. Histological examination showed a hyalinised lesion with a nodular architecture imparted by nodules of small capillary channels with red cell extravasation, and scattered admixed chronic inflammatory cells. A rare lesion

of indeterminate aetiology, SANT remains a curiosity and an essential diagnostic consideration among vascular lesions of the spleen with features not typical of haemangioma.

A REVIEW OF BRAIN BANK QUALITY ANALYSIS PROCEDURES FOR HUMAN POST-MORTEM TISSUE SAMPLES

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There are currently 139 international brain bank facilities which collect, store and provide nervous system samples for research purposes. The human post-mortem brains within these brain banks have underpinned the basic understanding of disorders affecting the central nervous system (CNS) and continue to support ongoing work in the fields of neuropathology and neuroscience. Without such services there would be major limitations in the capability of neuroscience research to accurately translate findings from animal models to those in human subjects. As a result, there are tens-of-thousands of published research articles which utilise samples from established brain banks for research, with the goal of gaining a better understanding of the aetiology, pathogenesis and mechanisms of progression of neurological diseases as well as providing advancements in diagnosis and treatments. Contrastingly, there has been little work done to compare the quality control analysis protocols currently being used in different brain banks; including which neurological biomarkers and proteins are commonly analysed. This literature review aims to identify which sampling protocols and analytical methods are currently used in the literature to assess the quality analysis of neurological tissue and to compare the standardisation of these procedures between different brain banks.

MYOID GONADAL STROMAL TUMOUR: A CASE REPORT

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Myoid gonadal stromal tumour is an emerging entity composed of spindle-shaped cells showing features of smooth muscle and gonadal stroma. These are rare tumours (<10 described in the literature), occur over a wide age range (4–59 years), but are typically found in middle-aged men,¹ with a median age of 41 years, who present with a mass.

Here we report a case of a 47-year-old man, NZ European/Pakeha, who presented with 5 weeks of tenderness in the right testicle.

Ultrasound scan showed an incidental, but suspicious 9 mm solid hypoechoic mass in the mid testis and he came forward for orchidectomy. Macroscopic findings revealed a 10 mm well circumscribed, pale soft, solid lesion within the hilar region of the testis. Microscopic examination showed an unencapsulated tumour, centred within the rete testis, composed of densely packed spindle cells which arranged in interweaving fascicles

within collagenous stroma. The spindle cells have uniform tapered nuclei and ill defined cytoplasm. Only one mitotic figure was identified. No lymphovascular or perineural invasion was seen.

Immunohistochemistry expressed markers of smooth muscle actin (SMA) and S-100. Inhibin showed weak positive staining. The tumour cells were negative for CD99, CD34, desmin and broad spectrum cytokeratin.

The histopathology and immunohistochemistry was consistent with a myoid gonadal stromal tumour and this is distinctly different from other sex cord-stromal tumours.

Reference

1. Chia-Sui K, Ulbright TM. Myoid gonadal stromal tumour. A clinico-pathologic study of three cases of a distinctive testicular tumour. *Am J Clin Pathol* 2014; 142: 675–82.

'FIJI BELLY' CULMINATING IN COLECTOMY: A CASE REPORT FROM NEW ZEALAND WITH BRIEF REVIEW OF LITERATURE

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Traveller's diarrhoea due to *Entamoeba histolytica* is a world-wide problem due to growing popularity of international travel to exotic locations. Acute fulminant or necrotising amoebic colitis is a rare but potentially fatal complication of intestinal amoebiasis, reported in only less than 0.5% of cases. Misdiagnosis as inflammatory bowel disease can result in inappropriate steroid therapy which can worsen the amebiasis.

We report the case of a 55-year-old male who became unwell after travelling to a rural area in Fiji. He was initially treated as diverticulitis and subsequently had appendectomy due to suspected appendicitis. Symptoms persisted and subsequent colonic biopsies revealed features of acute colitis and revealed no microorganisms. The patient was treated for inflammatory bowel disease with Pentasa and prednisone, but continued to deteriorate. Fulminant colitis was suspected based on imaging findings and a subtotal colectomy was performed. Histopathological examination revealed flask shaped ulceration and areas of necrosis containing abundant microorganisms morphologically consistent with *Entamoeba*. The patient recovered well after anti-amoebic medication.

A high index of suspicion is essential for early diagnosis of amoebic colitis to prevent misdiagnosis, inappropriate steroid treatment and prevent complications such as acute necrotising colitis.

CHARACTERISING THE IMMUNE RESPONSE IN BRAF V600E AND BRAF WILD TYPE MELANOMA

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Background: BRAF V600E mutation may confer immune evasion through upregulating immunoregulatory cytokines and

decreasing expression of melanoma differentiation antigens, thus being a target in cancer immunotherapy.¹

Aim: To analyse the lymphocytic immune response in BRAF V600E and BRAF wild type (WT) primary melanoma.

Methods: Cases were selected through the Victorian Melanoma Service and the Molecular Laboratory Database, Alfred Health. BRAF V600E ($n=11$) and BRAF WT ($n=11$) primary cutaneous melanoma were matched according to subtype and Breslow thickness. Density and distribution of infiltrating lymphocytes were analysed following immunoperoxidase studies using CD3, CD4, CD8 and CD20 antibodies performed on serial sections, quantified by Image J analysis, and analysed using a one-way ANOVA with Tukey's multiple comparisons test.

Results: CD8+ T cells were the predominant infiltrating cell type [mean density and 95% CI (cells/mm²) WT: 325 (200–450) vs V600E: 480 (317–643)], while infiltration with CD4+ T cells and CD20+ B cells were less prominent as compared to CD8+ T cells ($p<0.01$). The mean difference of cell density was not significantly different between matched BRAF V600E and WT melanomas.

Conclusion: There was no significant difference in the cell type, density or distribution of the immune infiltrate between matched BRAF V600E and WT melanomas.

Reference

1. Ilieva KM, Correa I, Josephs DH, *et al.* Effects of BRAF mutations and BRAF inhibition on immune responses to melanoma. *Mol Cancer Ther* 2014; 13: 2769–83.

ORBITAL IgG4 RELATED DISEASE IN A PATIENT WITH IRKA VARIANT GENE: A CASE REPORT

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To our knowledge there are less than 30 reported cases of IgG4 related disease (IgG4RD) in the paediatric population.¹

We report a case of orbital IgG4-RD in a 14 month male infant with IRKA variant gene. He underwent an incisional biopsy for exophthalmos with a clinical suspicion of rhabdomyosarcoma. Prior to this admission the patient had multiple episodes of infection with possible immunodeficiency. Frozen sections demonstrated fibroinflammatory tissue with no evidence of malignancy. Paraffin sections revealed fragments of a mass with extensive fibrosis and a focally dense lymphoplasmacytic infiltrate with obliterative phlebitis, and increased absolute and relative numbers of IgG4+ plasma cells, in keeping with IgG4-RD. Immunosuppressive treatment was initiated but his clinical course was complicated by multiple infections including Pseudomonas meningoenzephalitis, Candidaemia and CMV viraemia (PCR positive), and by intestinal pseudo-obstruction likely IgG4 related. In view of multiple infections and early presentation with an immune mediated disease, immunodeficiency gene panels were performed. An IRKA variant gene was detected, which was consistent with patient's phenotype.

According to current literature, there is not a specific association between IgG4-RD and immunodeficiency. This case demonstrates IgG4-RD at an earlier age than usual can be an unusual presentation of an immune dysregulatory/immunodeficiency disease.²